

**DEPARTMENT of ENVIRONMENTAL SERVICES**  
**Water Supply & Pollution Control Division - Biology Bureau**

**LAKE TROPHIC DATA**

**MORPHOMETRIC:**

Lake: GLEN LAKE	Lake Area (ha): 48.08
Town: GOFFSTOWN	Maximum depth (m): 15.8
County: Hillsborough	Mean depth (m): 5.9
River Basin: Merrimack	Volume (m <sup>3</sup> ): 2826500
Latitude: 43°01'00" N	Relative depth: 2.0
Longitude: 71°34'30" W	Shore configuration: 1.91
Elevation (ft): 271	Areal water load (m/yr): 470.6
Shore length (m): 4700	Flushing rate (yr <sup>-1</sup> ): 80.00
Watershed area (ha): 52400.0	P retention coeff.: 0.01
% watershed ponded: 1.2	Lake type: artificial

**BIOLOGICAL:**

**3 February 1992**

**25 June 1991**

DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	ASTERIONELLA 75%
	#2		TABELLARIA 20%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			1445
CHLOROPHYLL-A (µg/L)			10.43
DOM. ZOOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	ACTINOPHYRS 93%
	#2		
	#3		
ROTIFERS/LITER		<1	<1
MICROCRUSTACEA/LITER		1	54
ZOOPLANKTON ABUNDANCE (#/L)		1	1079
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			1.8
BOTTOM DISSOLVED OXYGEN (mg/L)		9.6	0.0
BACTERIA (fecal col., #/100 ml)	#1		< 1
	#2		< 1
	#3		

**SUMMER THERMAL STRATIFICATION:**

**stratified**

Depth of thermocline (m): 11.0  
Hypolimnion volume (m<sup>3</sup>) : 153500  
Anoxic volume (m<sup>3</sup>) : 86000

**CHEMICAL:**

Lake: GLEN LAKE

Town: GOFFSTOWN

	3 February 1992		25 June 1991		
DEPTH (m)	4.0	10.0	3.0	9.0	13.0
pH (units)	6.7	6.4	7.2	6.7	6.3
A.N.C. (Alkalinity)	5.2	4.1	9.1	9.0	8.9
NITRATE NITROGEN	0.10	0.15	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.007	0.007	0.020	0.021	0.028
CONDUCTIVITY ( $\mu$ mhos/cm)	76.5	93.5	78.0	76.4	63.3
APPARENT COLOR (cpu)	22	22	44	53	85
MAGNESIUM			0.84		
CALCIUM			4.3		
SODIUM			8.4		
POTASSIUM			0.68		
CHLORIDE	14	18	14		9
SULFATE	6	6	12		4
TN : TP					
CALCITE SATURATION INDEX			2.5		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1991**

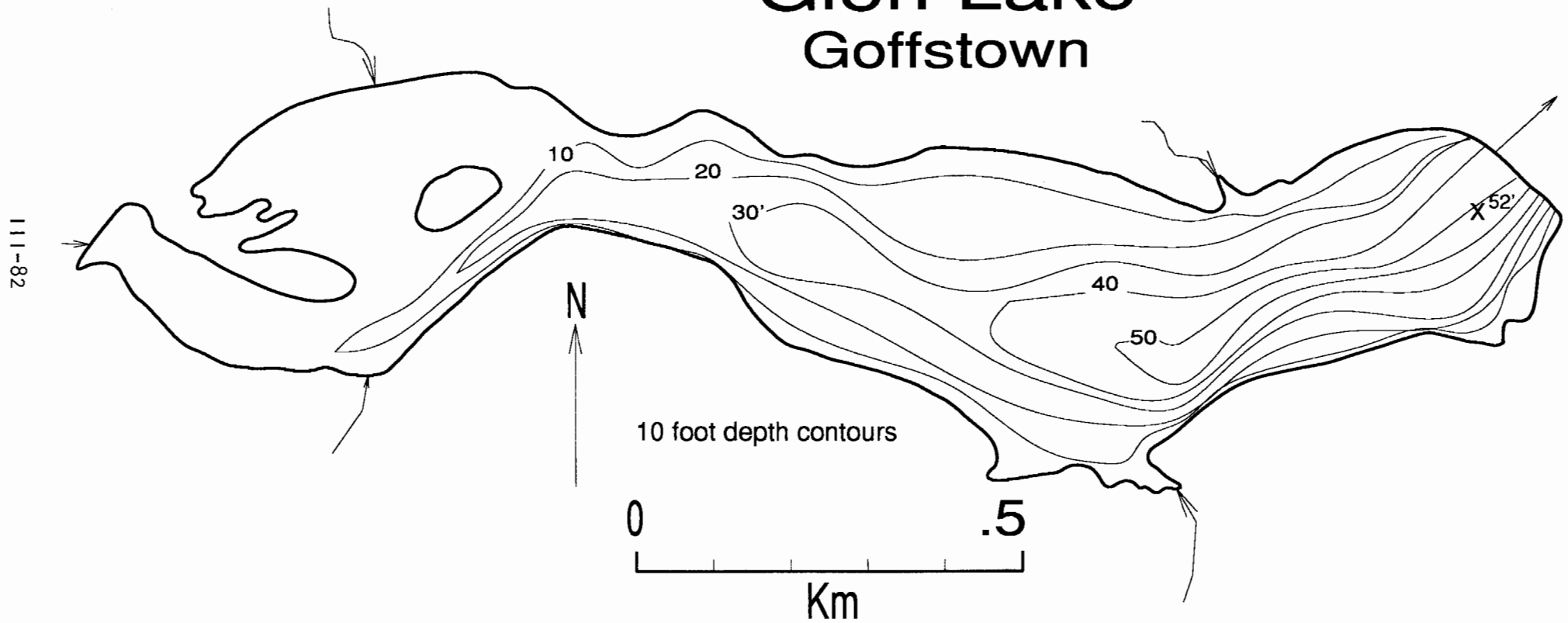
D.O. S.D. PLANT CHL TOTAL CLASS

4	4	0	2	10	Meso.
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**COMMENTS:**

1. Also known as Greggs Falls.
2. This is an impoundment of the Piscataquog River behind a hydro-electric dam.
3. Good access to the pond at a roadside beach area near the dam.
4. This lake was previously surveyed in 1979. It went from eutrophic to mesotrophic, but it was borderline mesotrophic/eutrophic in both years. There was no significant change in water quality between the two years.
5. This lake has a history of nuisance blue-green algae problems due to a treated sewage discharge from the Town of Goffstown. In September of 1991 this sewage discharge was diverted out of Glen Lake. Improved water quality is expected as a result of diverting the discharge.

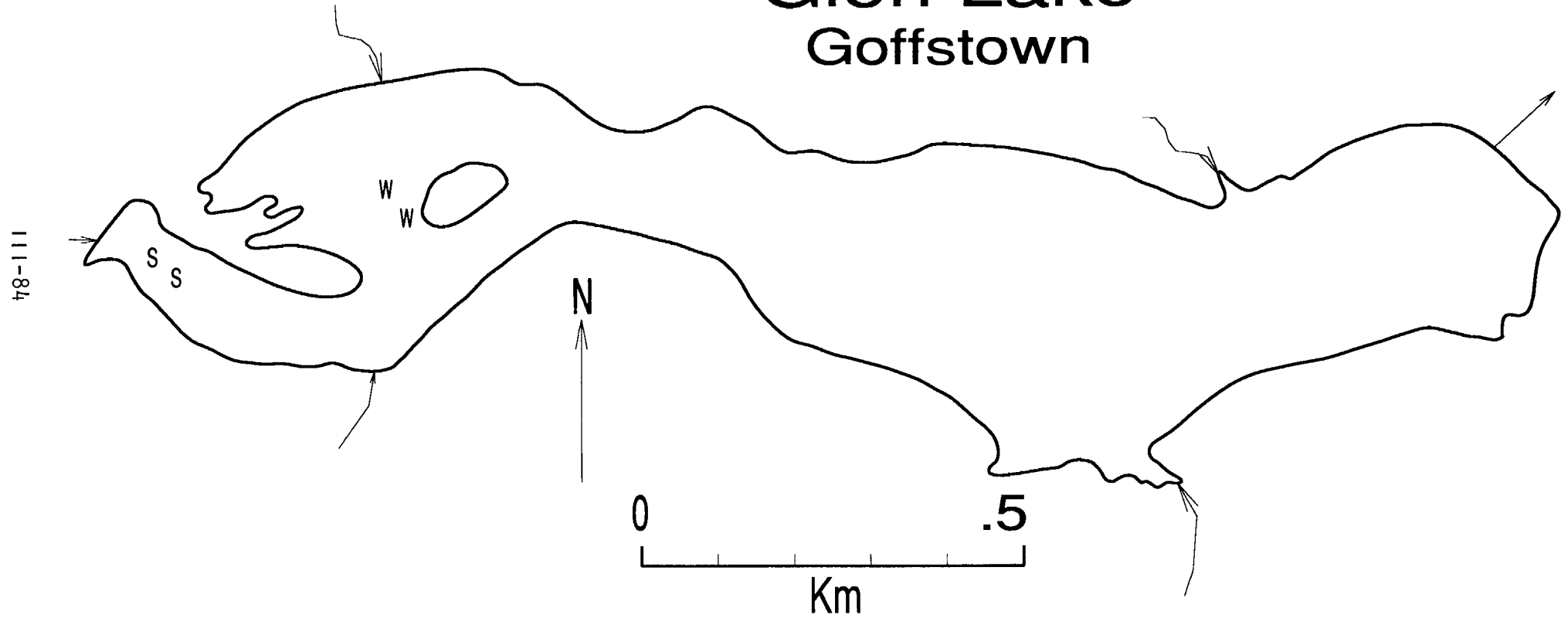
# Glen Lake Goffstown



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# Glen Lake

## Goffstown



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